

SEQUENCE LISTING

<110> PROUDFOOT, AMANDA
 KOSCO-VILBOIS, MARIE
 WELLS, TIMOTHY

<120> CHEMOKINES MUTANTS HAVING IMPROVED ORAL BIOAVAILABILITY

<130> ARS-103

<140> US 10/510,014
 <141> 2004-09-30

<150> PCT/EP03/50084
 <151> 2003-03-31

<150> EP 02100339.7
 <151> 2002-04-04

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<170> PatentIn version 3.1

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Met Lys Val Ser Ala Ala Ala Leu Ala Val Ile Leu Ile Ala Thr Ala
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Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro
 -5 -1 1 5

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
 10 15 20 25

Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val Phe
 30 35 40

Val Thr Ala Ala Asn Ala Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
 45 50 55

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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 <213> Escherichia coli

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Tyr Ser Ser Asp Thr Thr Pro Cys Cys Phe Ala Tyr Ile Ala Arg Pro
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 Leu Pro Arg Ala His Ile Lys Glu Tyr Phe Tyr Thr Ser Gly Lys Cys
 20 25 30
 Ser Asn Pro Ala Val Val Phe Val Thr Ala Ala Asn Ala Gln Val Cys
 35 40 45
 Ala Asn Pro Glu Lys Lys Trp Val Arg Glu Tyr Ile Asn Ser Leu Glu
 50 55 60
 Met Ser
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 Leu Cys Ala Pro Ala Ser Ala Met Ser Pro Tyr Ser Ser Asp Thr Thr
 -5 -1 1 5
 Pro Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile
 10 15 20 25
 Lys Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val
 30 35 40
 Phe Val Thr Ala Ala Asn Ala Gln Val Cys Ala Asn Pro Glu Lys Lys
 45 50 55
 Trp Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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Met Lys Val Ser Ala Ala Ala Leu Ala Val Ile Leu Ile Ala Thr Ala
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Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro
 -5 -1 1 5

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
 10 15 20 25

Glu Tyr Phe Tyr Thr Ser Asn Lys Cys Ser Asn Pro Ala Val Val Phe
 30 35 40

Val Thr Ala Ala Asn Ala Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
 45 50 55

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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Ser Pro Tyr Ser Ser Asp Thr Thr Pro Cys Cys Phe Ala Tyr Ile Ala
 1 5 10 15

Arg Pro Leu Pro Arg Ala His Ile Lys Glu Tyr Phe Tyr Thr Ser Gly
 20 25 30

Lys Cys Ser Asn Pro Ala Val Val Phe Val Thr Arg Glu Asn Arg Gln
 35 40 45

Val Cys Ala Asn Pro Glu Lys Lys Trp Val Arg Glu Tyr Ile Asn Ser
 50 55 60

Leu Glu Met Ser
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Trp Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
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Phe Tyr Thr Ser Asn Lys Cys Ser Asn Pro Ala Val Val Phe Val Thr
30 35 40

Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp Val Arg
 45 50 55

Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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Ala Ser Leu Ala Ala Asp Thr Pro Thr Ala Cys Cys Phe Ser Tyr Thr
 1 5 10 15

Ser Ala Gln Ile Pro Gln Asn Phe Ile Ala Asp Tyr Phe Glu Thr Ser
 20 25 30

Ser Gln Cys Ser Lys Pro Gly Val Ile Phe Leu Thr Lys Ala Ser Ala
 35 40 45

Gln Val Cys Ala Asp Pro Ser Glu Glu Trp Val Gln Lys Tyr Val Ser
 50 55 60

Asp Leu Glu Leu Ser Ala
 65 70

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Ala Arg Lys Leu Pro Arg Asn Phe Val Val Asp Tyr Tyr Glu Thr Ser
 20 25 30

Ser Leu Cys Ser Gln Pro Ala Val Val Phe Gln Thr Ala Ala Ser Ala
 35 40 45

Gln Val Cys Ala Asp Pro Ser Glu Ser Trp Val Gln Glu Tyr Val Tyr
 50 55 60

Asp Leu Glu Leu Asn
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 20 25 30

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
 35 40 45

Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val Phe
 50 55 60

Val Thr Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
 65 70 75 80

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
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Leu Cys Ala Pro Ala Ser Ala Met Ser Pro Tyr Ser Ser Asp Thr Thr
 -5 -1 1 5

Pro Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile
 10 15 20 25

Lys Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val
 30 35 40

Phe Val Thr Arg Lys Asn Lys Gln Val Cys Ala Asn Pro Glu Lys Lys
 45 50 55

Trp Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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Leu Cys Ala Pro Ala Ser Ala Tyr Ser Ser Asp Thr Thr Pro Cys Cys
 -5 -1 1 5

Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys Glu Tyr
 10 15 20 25

Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val Phe Val Thr
 30 35 40

Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp Val Arg
 45 50 55

Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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Met Lys Val Ser Ala Ala Ala Leu Ala Val Ile Leu Ile Ala Thr Ala
 -20 -15 -10

Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro
 -5 -1 1 5

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
 10 15 20 25

Glu Tyr Phe Tyr Thr Ser Asn Lys Cys Ser Asn Pro Ala Val Val Phe
 30 35 40

Val Thr Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
 45 50 55

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
 60 65

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Ala Ser Leu Ala Ala Asp Thr Pro Thr Ala Cys Cys Phe Ser Tyr Thr
 1 5 10 15

Ser Arg Gln Ile Pro Gln Asn Phe Ile Ala Asp Tyr Phe Glu Thr Ser
 20 25 30

Ser Gln Cys Ser Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Ser Arg
 35 40 45

Gln Val Cys Ala Asp Pro Ser Glu Glu Trp Val Gln Lys Tyr Val Ser
 50 55 60

Asp Leu Glu Leu Ser Ala
 65 70

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Ala Pro Met Gly Ser Asp Pro Pro Thr Ala Cys Cys Phe Ser Tyr Thr
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Ala Arg Lys Leu Pro Arg Asn Phe Val Val Asp Tyr Tyr Glu Thr Ser
 20 25 30

Ser Leu Cys Ser Gln Pro Ala Val Val Phe Gln Thr Lys Arg Ser Lys
 35 40 45

Gln Val Cys Ala Asp Pro Ser Glu Ser Trp Val Gln Glu Tyr Val Tyr
 50 55 60

Asp Leu Glu Leu Asn
65